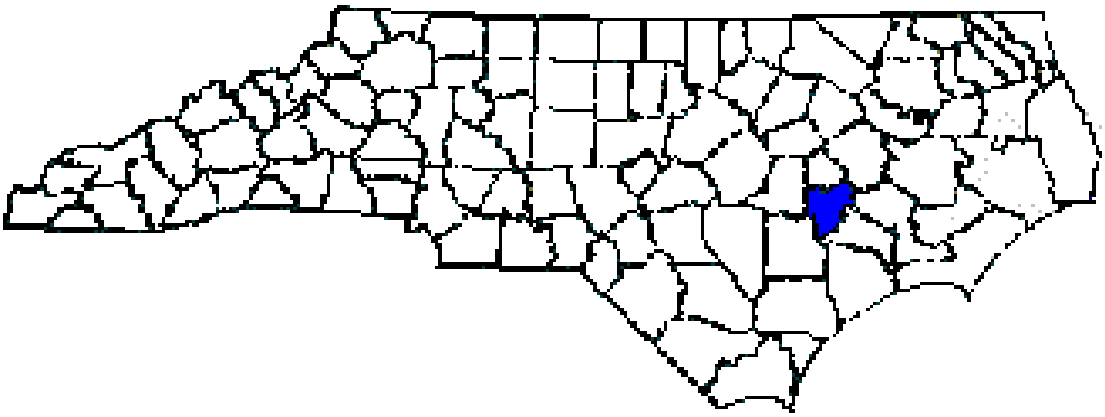
ANNUAL REPORT FOR 2015



Banks School Road Buffer Mitigation Site
Lenoir County
TIP No. R-2719A
COE Action ID: 200511238
DWR Project #: 20050787

Prepared By:
Roadside Environmental Unit & Natural Environment Section
North Carolina Department of Transportation
June 2015

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SUMMARY

The following report summarizes the buffer monitoring activities conducted during 2015 at the Banks School Road Buffer Mitigation Site. This site, situated adjacent to the new US 70 Bypass near Kinston, was planted during January 2013 by the North Carolina Department of Transportation (NCDOT) in order to provide mitigation for buffer impacts associated with the construction of Transportation Improvement Program (TIP) number R-2719A. This report provides the monitoring results for the third formal year of monitoring (Year 2015). The site must demonstrate vegetation success for a minimum of five years or until the site is deemed successful.

In December 2013, NCDOT personnel noted that a portion of the buffer had been mowed. In February 2014, the mowed portion of the buffer was replanted, locks were installed on all gates into the site, and mitigation signs were installed at the site to prevent further encroachments. See Appendix D for site map of mowed and replanted buffer. In September 2015, NCDOT sprayed an herbicide application on the privet noted onsite as requested by NCDWR.

There were two vegetation monitoring plots established throughout the buffer restoration area. The 2015 vegetation monitoring of the site revealed an average tree density of 555 trees per acre. This average is well above the minimum success criteria of 320 trees per acre for Year 3.

NCDOT will continue vegetation monitoring at the Banks School Road Buffer Mitigation Site in 2016.

1.0 INTRODUCTION

1.1 Project Description

The following report summarizes the buffer monitoring activities that have occurred during 2015 at the Banks School Road Buffer Mitigation Site. The site is located adjacent to new US 70 Bypass near Kinston (Figure 1). The site was constructed to provide mitigation for impacts associated with (TIP number) R-2719A in Lenoir County. The 21.28 acre site provides the following types of mitigation: 0.68 acre of non-riverine wetland restoration, 2.1 acres of riparian buffer, 2.07 acres of wetland enhancement, 3.92 acres of jurisdictional wetland preservation and preservation of 13.01 acres of non-jurisdictional uplands.

1.2 Purpose

In order for a mitigation site to be considered successful, the site must meet vegetation success criteria. This report details the vegetation monitoring in 2015 at the Banks School Road Buffer Mitigation Site. Hydrologic monitoring was not required for the site.

1.3 Project History

January 2013	Buffer Restoration Area Planted
July 2013	Vegetation Monitoring (Year 1)
February 2014	Replanted Mowed Area
June 2014	Vegetation Monitoring (Year 2)
June 2015	Vegetation Monitoring (Year 3)
September 2015	Herbicide Application on Privet

1.4 Debit Ledger

The entire Banks School Road Buffer mitigation site was used for the R-2719A project to compensate for unavoidable buffer impacts.

Figure 1. Site Location Map

2.0 VEGETATION: BANKS SCHOOL ROAD BUFFER MITIGATION SITE (YEAR 3 MONITORING)

2.1 Success Criteria

Buffer Success Criteria states that monitoring shall consist of visual review and photo evidence. An annual report shall be submitted to the DWQ for a period of five years showing monitoring results, survival rate/success of tree and vegetation establishment, and that diffuse flow through the riparian buffer has been maintained. The first annual report shall be submitted within one year of final planting. Failure to achieve a buffer density of 320 trees per acre after five years will require the annual report to provide appropriate remedial actions to be implemented and a schedule of implementation. Approval of the final annual report and a formal "close out" of the mitigation site by the DWQ is required.

2.2 Description of Species

The following tree species were planted in the Buffer Restoration Area:

Betula nigra, River Birch

Fraxinus pennsylvanica, Green Ash

Quercus lyrata, Overcup Oak

Quercus michauxii, Swamp Chestnut Oak

Quercus phellos, Willow Oak

2.3 Results of Vegetation Monitoring

Plot #	River Birch	Green Ash	Overcup Oak	Swamp Chestnut Oak	Willow Oak	Total (Year 3)	Total (at planting)	Density (Trees/Acre)
1	7	13	6	9	1	36	42	583
2	1	9	6	15	0	31	40	527
Year 3 Average Density (Tree/Acre)								**555**
Year 2 Average Density								556
Year 1 Average Density								580

Site Notes: In September 2015, NCDOT sprayed an herbicide application on the privet noted onsite as requested by NCDWR. Other species noted onsite included sweetgum, dogwood, red maple, pine, sycamore, tulip poplar, and various grasses.

2.4 Conclusions

There are a total of 2 vegetation monitoring plots established throughout the buffer restoration area. The 2015 vegetation monitoring of the site revealed an average tree density of 555 trees per acre. This average is well above the minimum success criteria of 320 trees per acre for the third year of monitoring. NCDOT proposes to continue monitoring vegetation at the Banks School Road Buffer Mitigation Site.

3.0 OVERALL CONCLUSIONS AND RECOMMENDATIONS

The 2015 year represents the third year of monitoring activities that have occurred at the Banks School Road Buffer Mitigation Site. The site must demonstrate vegetation success for a minimum of five years or until the site is deemed successful.

There were two vegetation monitoring plots established throughout the 2.1 acre site. The 2015 vegetation monitoring of the site revealed an average density of 555 trees per acre.

NCDOT will continue vegetation monitoring at the Banks School Road Buffer Mitigation Site in 2016.

APPENDIX A

SITE PHOTOS

Banks School Rd. Buffer Mitigation Site

Photo Point #1 looking East at Vegetation Plot #1

Photo Point #2 looking South

Photo Point #3 looking East at Vegetation Plot #2

Photo Point #4 looking Southeast toward C.F. Harvey Pkwy

Overview Photo taken from C.F. Harvey Pkwy
June 2014

APPENDIX B, C, & D

AS-BUILT PLAN SHEET, SITE MAP WITH PHOTO POINT AND VEGETATION PLOT LOCATIONS & SITE MAP OF MOWED AND REPLANTED AREA

GRAPHIC SCALE
100 50 0 100 200
PLANS

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	OSM-8

PROJECT ENGINEER

R-2719A AS BUILT PLANS
9 OF 11

AS BUILT NOTE: THIS SHEET DEPICTS BUFFER RESTORATION AREA

NAD 83

BUFFER RESTORATION
2.1 ACRES

PHOTO POINTS

VEGETATION PLOTS

PLANT 50' BUFFER ALONG SOUTH BANK OF EXISTING STREAM

FILL EXISTING CHANNEL

CHANNEL PLUG

REVEGETATION BOUNDARY

REVISIONS

(R-NOV-2015 0920)
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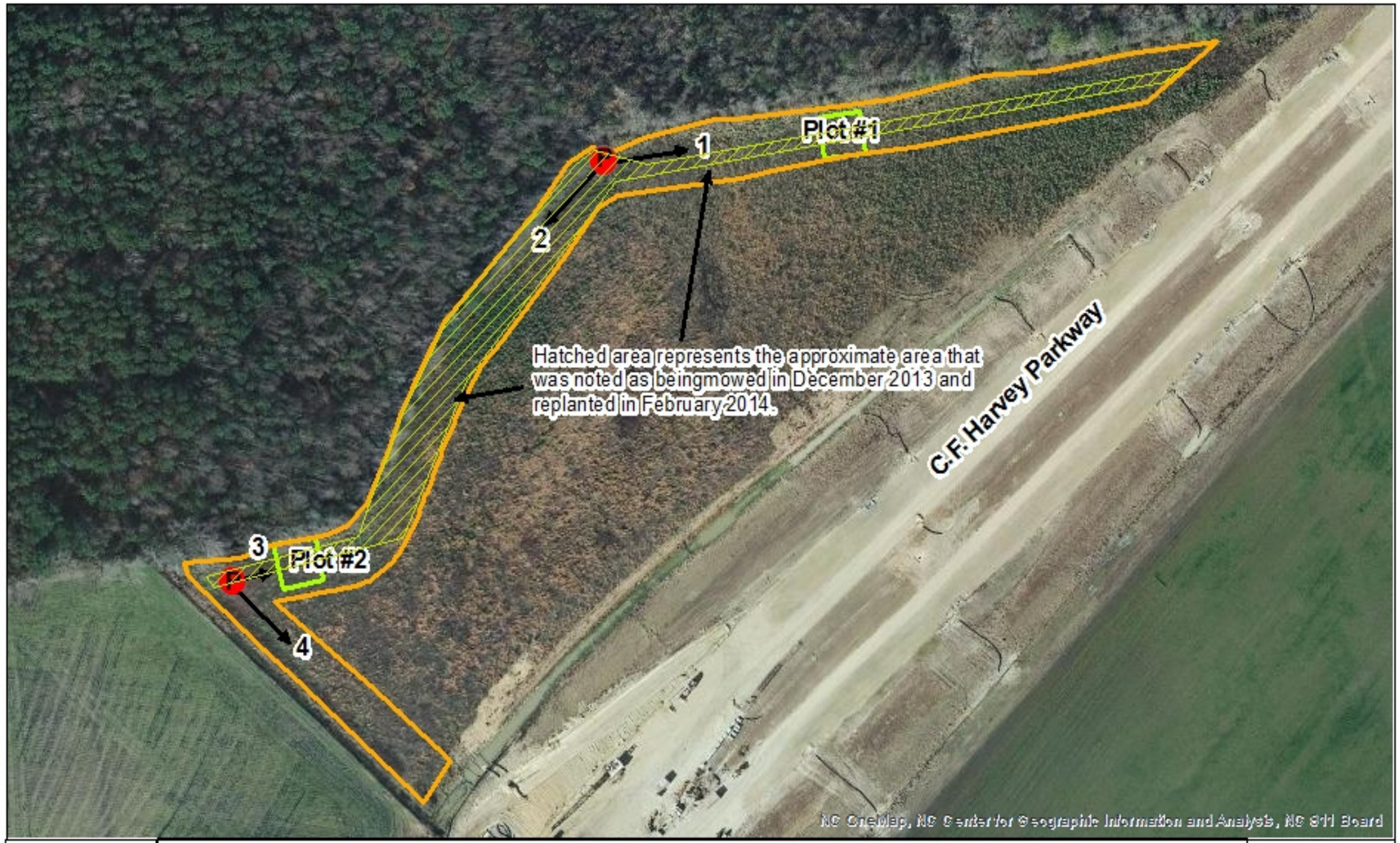
Appendix B. As-Built

R-2719A BANKS SCHOOL ROAD BUFFER MITIGATION SITE
PHOTO POINT AND VEGETATION PLOT LOCATIONS
LENIOR COUNTY, NORTH CAROLINA

0 150 300 600 Feet

N
W E
S

Appendix C. Site Map



Appendix D. Site Map of Mowed and Replanted Area